

**MILAGRO/INTEX-B Mission Site Survey**  
**Veracruz & Mexico City, Mexico**  
**November 30 - December 2, 2005**  
**Mike Gaunce, NASA ESPO**

Purpose of site survey was to assess J-31 and King Air operations for the MILAGRO mission from Veracruz airport and to meet with Mexican personnel to discuss required logistics and air traffic issues. Discussions focused on site logistics, required clearances, flight planning and air traffic control, and other considerations for operations in Mexico.

NASA participants included: Phil Russell, Chris Hostetler, Leslie Kagey, Mike Wusk, Martin Trout, and Mike Gaunce. NCAR participants included Jose Meitin and Ed Ringleman. Bob Hannigan from DOE and Joseph Hovelman from Sky Research also attended.

**I. General Heriberto Jara International Airport, Veracruz, Mexico**

Met with Mr. Alfonso Pacheco, Veracruz Airport Finance and Administration Manager and Mr. Arturo Cejas, Operations and Maintenance Manager. Both work for ASUR, a private company which operates the airport under contract from the Mexican government. We reviewed J-31 and King Air operations plans, schedules, and logistics with the ASUR representatives. Airport personnel were amenable to proposed aircraft plans and to locating ground-based instruments (e.g., Cimel radiometer) on the nearby grounds or possible rooftops.

Site survey team reviewed ramp area where MILAGRO aircraft will be located and adjacent areas where support trailers will be located. Airport personnel felt there was sufficient ramp space to accommodate four-five MILAGRO aircraft. There is no available hangar space at the airport. The airport has ground support equipment available for rent, such as stairs, belt loader, and power unit through two FBOs, SEAT and Menzies Aviation. The airport would charge landing, ramp, and flight plan filing fees. Each aircraft will need to set up an account with ASUR to pay for these fees (fee schedule was provided). Customs declaration forms (for aircraft) were provided and distributed to G-1, J-31, King Air, and C-130 flight personnel. (Individual immigration and customs forms will be required for all personnel entering the country.)

Aircraft fuel is provided by ASA services. Fuel costs are currently around \$5.3 pesos/l (\$1.90/gal), plus taxes and fees. ASA can accept multi-service cards (account types 1802 and 4991). Hours of operation are 7 am-9 pm.

Personnel working at the airport would need badges and car passes. The badging will be coordinated through NCAR. Ramp training may be required for flight operations personnel.

The Veracruz airport is located at 19.1° N latitude, 96.2° W longitude, about 15 km (10 miles) west of the city of Veracruz. The airport has two runways, Runway 18/36 at 2400 m by 45 m, and Runway 09/27 at 1520 m by 45 m, with limited taxiways. There is no ILS at the airport, only VOR. Currently, Continental is the only U.S. carrier flying directly to Veracruz. Mexicana and Aeromexico fly frequently from Mexico City to Veracruz. Driving from Mexico City to Veracruz takes about 4-5 hours.

The airport terminal has a bank and ATM, Prodigy Mobile wireless internet (need to buy access/minute card), and a restaurant with full menu on the 2<sup>nd</sup> floor. There is some available office space for rent in the terminal.

## II. SENEAM

Met with Ricardo Torres, Deputy Manager of Air Transit Services of SENEAM (Mexican Air Traffic Control), and several other air traffic managers and officials from the Mexico City air traffic control center. Also present was Mr. Noe Vera, the Veracruz ATC station chief. Proposed flight plans for the MILAGRO aircraft (G-1, J-31, King Air, DC-8, and C-130) were presented for review and comment. SENEAM also provided a description of the air traffic sectors around Mexico City and general traffic considerations. In general, SENEAM felt most of the proposed flight plans were feasible, given local air traffic restrictions. However, SENEAM pointed out the need to get clearances for restricted military airspace north and east of Mexico City. This requires additional coordination by NCAR. There is also significant helicopter traffic between Mexico City and Toluca which needs to be accounted for in flight plan development.

Regarding a low approach of the DC-8 over Mexico City, Mr. Torres will confirm with his management whether this can be approved. If approved, the DC-8 would need to approach Mexico City under a standard commercial air traffic approach during non-peak hours (10 am-12 pm, and 2:30-5:00 pm). Also, SENEAM saw no major issues regarding lidar laser safety procedures and constraints for the King Air and the DC-8. Regarding balloon launches, the Mexican DGAC (civil aviation authority) would require advance schedules and would issue NOTAMS. These should be reviewed daily by the MILAGRO aircraft to ensure proper separation is maintained.

MILAGRO aircraft will need to revise their proposed flight plans (with waypoint descriptions) by the end of January 2006. Jose Meitin of NCAR will provide a list of contacts numbers (towers, ACC, etc.) to each of the MILAGRO aircraft.

## III. General Information

Hotels. The Hotel Camino Real Veracruz is located about 5 km south of the city center, and about 12 km east of the airport. The hotel has 154 rooms, with swimming pool and exercise room. Internet access is included in the room rate. There is currently no ATM at the hotel, but there is an ATM at the hotel next door. Many rooms have now been reserved for the mission. The hotel has a restaurant and a bar. There is a small airport shuttle service from the hotel to the airport.

the hotel is full. There are no vending machines at the hotel (buy bottled water at nearby grocery or convenience stores). There are nearby restaurants and shopping.

**Point of Contact:**

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Two other nearby hotel options are the Fiesta Americana (229-989-8989) next door to the Camino Real, and a Holiday Inn Crowne Plaza (229-989-2100) about 1 mile away.

Local Transportation. Alamo, Avis, Hertz, Dollar, and Budget rental cars are located at the airport.

Taxi to from the airport is about \$15. Taxi to downtown Veracruz is about \$5.

Restaurants. There are dozens of restaurants in Veracruz. Mexican chains, such as Sanborn's, Vip's, El Porton, and Wings serve good quality food at low prices. Veracruz is known for its city center (zocalo); restaurants around the center are under the "*Portales*". Tasca is a good choice.

Visas. No visa is required in Mexico for U.S. citizens. May be required for other U.S. permanent residents.

U.S. Embassy. There is no U.S. consulate in Veracruz. For consular matters, contact the Embassy in Mexico City on Paseo de la Reforma, Phone: 52-55-5080-2000.

Per Diem. U.S. Government per diem rate for Veracruz is \$120 lodging, \$71 M&IE.

Money. Current exchange rate is 10.5 pesos/dollar as of 12/1/05. ATMs (or *cajeros*) are available in the city. Some places, especially hotels, will take or exchange dollars. Major Mexican banks are: Banamex, Banorte, Santander- Serfin, and Banco Nacional.

Health and Safety. Do not drink tap water; buy bottled water. Violent crime is less serious in Veracruz compared to other parts of Mexico, but petty crime, especially pick-pocketing, does occur.

Local hospital: Millennium Medical Center, Av Juan Pablo II, Boca del Rio, 229-925-5200.



**Veracruz Airport & Terminal – Aerial View**



**Airport Ramp View – GA Parking Area**





**Airport Ramp View – From GA Parking Area to Terminal**



**Hotel Camino Real, Veracruz – MILAGRO Hotel & Operations Center**